April 15, 2024

[Submitted Electronically]

Division of Dockets Management
U.S. Food and Drug Administration
5630 Fishers Lane, Room 1061
Rockville MD 20852

RE: Supplement to Petition FDA-2023-P-3767, Action Urgently Needed to Address Off-Label Use of Puberty Blockers in Children

On September 2, 2023, a coalition of physicians and organizations concerned about the medical care of minors submitted a Citizen Petition under 21 C.F.R. § 10.30 to request that the Commissioner of Food and Drugs take urgent action against the off-label use of GnRH agonists in children ("Petition"). The Petition requests that the FDA do the following:

- Commission a systematic review by the National Academy of Sciences, Engineering, and Medicine (NASEM) of the evidence concerning the off-label use of puberty blockers to treat "gender dysphoria" in children.
- Issue written requests under the Best Pharmaceuticals for Children Act (BPCA) for long-term registry studies of this off-label use.
- Create a dedicated web page concerning this off-label use.
- Alert manufacturers and providers to the consequences of unlawful promotions of this off-label use.

The FDA acknowledged the Petition on September 5, 2023, and issued a form interim response letter on February 22, 2024, stating that the Petition remains under review. But to date, the FDA has not responded substantively to the petitioners' requests for relief.

Since the Petition was filed, several developments have increased the need for decisive action by the FDA. These developments include international health bodies acknowledging the poor state of evidence supporting pediatric interventions to modify sex traits, a scientific review of literature supporting a possible adverse effect of puberty blockers on IQ, and the release of a damning report disclosing additional lifelong harm from these interventions. We are filing this letter under 21 C.F.R. § 10.30(g) to supplement the Petition with a summary of recent developments that further demonstrate that the risks from off-label use of puberty blockers in children exceed the purported benefits, supporting our call for urgent action by the FDA. New signatories have joined the Petition, including clinicians, researchers, and organizations from Belgium, Canada, Finland, France, Norway, South Africa, Sweden, the United Kingdom, and the United States. They join the other petitioners in urging the FDA to add its leadership to the international effort to address a threat to the health and wellbeing of vulnerable children.

Below are the most important developments since the Petition was filed.

1. **Foreign health authorities have taken additional action to reevaluate and restrict access to puberty blockers for children diagnosed with gender dysphoria.**

On April 9, 2024, an independent group commissioned by England's National Health Service (NHS) issued the report, The Independent Review of Gender Identity Services for Children and Young People ("Independent Review").[1] Supplementing existing systematic reviews with "a robust and independent evidence review and research programme from the University of York," the Independent Review identifies multiple potential risks of puberty blockers—including interference with the development of sexuality and "gender identity", neurocognitive development, subsequent genital surgery, and bone health. The Independent Review did not find evidence that puberty blockers improve gender dysphoria and found "inconsistent results" concerning other improvements in mental health.[2] Rather than attempt to summarize the far-ranging—and damning—review of gender related care contained in the Independent Review, we are attaching a copy as **Attachment 1.** The full Independent Review is worth reading for its methodical reporting of how unproven interventions with unknown side effects came to be the standard of care for distressed children.

Even before issuance of the Independent Review, England's NHS had decided that it would no longer commission the use of puberty blockers in children diagnosed with gender dysphoria, stating:

> We have concluded that there is not enough evidence to support the safety or clinical effectiveness of (puberty suppressing hormones)[.][3]

This determination followed the systematic review of evidence conducted by the UK's National Institute for Health and Care Excellence, which found evidence to support the off-label use of puberty blockers to treat youth diagnosed with gender dysphoria to be of "very low certainty." **Petition**, note 25. In England, puberty blockers will remain available for this use for children in clinical investigations.

The Petition discussed systematic reviews of evidence and reevaluation of the use of puberty blockers in children to treat gender dysphoria in the United Kingdom, Sweden, Finland, Norway, and France. Denmark has also limited prescriptions of puberty blockers for this use, and even the Netherlands, which initiated use of puberty blockers in children according to the "Dutch Protocol," has joined the chorus of international regulators questioning the safety and effectiveness of the off-label use of puberty blockers in these children.[4] These additional actions by socially liberal countries with highly developed health care systems further isolate the United States, where federal officials have not only refused to critically examine the continued off-label use in children of potent drugs of unproven efficacy but have in some cases endorsed it.[5]

2. **The World Health Organization (WHO) has acknowledged the lack of evidence to support pediatric interventions to modify sex traits.**

On December 18, 2023, the WHO announced the formation of a Guideline Development Group (GDG) to develop a "guideline on the health of trans and gender diverse people."[6] According to the WHO announcement, the guideline would:

> provide evidence and implementation guidance on health sector interventions aimed at increasing access and utilization of quality and respectful health services by trans and gender diverse people. The guideline will focus in 5 areas: provision of gender-affirming care, including hormones; health workers education and training for the provision of gender-inclusive care; provision of health care for trans and gender diverse people who suffered interpersonal violence based in their needs; health policies that support gender-inclusive care, and legal recognition of self-determined gender identity.[7]

But instead of staffing the GDG with respected clinicians and scientists in a variety of relevant disciplines to ensure the guideline was evidence-based, composition of the GDG was weighted towards activists who promote the "gender affirming" model. For this and other reasons, the WHO initiative received widespread criticism,[8] prompting the WHO to clarify that the guideline would focus on adults only. The WHO stated: "the evidence base for children and adolescents is limited and variable regarding the longer-term outcomes of gender affirming care for children and adolescents."[9]

In other words, the WHO has acknowledged what several national health authorities have already concluded, namely, that the evidentiary basis for pediatric interventions to modify sex traits—interventions that include puberty blockers—is poor. The acknowledgement adds to the growing international consensus that the off-label use of puberty blockers in children is not evidence-based and contradicts the claim of one highly placed United States health official that "[t]here is no argument among medical officials" concerning such pediatric interventions.[10]

3. **A narrative review of literature on pubertal suppression has confirmed the poor quality of the literature and found a potential harmful effect on IQ.**

The Petition discusses potential effects on neurocognitive development as one of several potential harms of puberty blockers, noting:

> the label of puberty blockers fails to disclose effects of the drugs on neurocognitive development because such effects have not been adequately studied. The adolescent brain undergoes changes rivaled only by those that occur in neonatal development, yet the neurocognitive effects of "pausing" puberty in adolescents is poorly understood. A group of experts in adolescent development— including prominent advocates of the affirmative model—developed consensus around the need for further study of the

> neurodevelopmental effects of puberty blockers, noting that "pubertal suppression may prevent key aspects of development during a sensitive period of brain organization."

Petition at 5 (*citations omitted*).

A recently published peer-reviewed narrative review supports this concern. The review published in *Acta Paediatrica,* includes "[a]ll studies reporting cognitive impacts of treatment with GnRH agonists/antagonists for pubertal suppression in animals or humans,"[11] or sixteen peer-reviewed studies. While noting "the poor quality of evidence," the review nonetheless finds that "studies examining the impact of puberty suppression in young people indicate a possible detrimental impact on IQ."[12] The review further notes that "[t]here is no evidence to date to support the oft cited assertion that the effects of puberty blockers are fully reversible."[13] This narrative review adds to the evidence discussed in the Petition that the potential harms of the off-label use of puberty blockers outweigh the purported—but unproven—benefits.[14]

Despite the concerning findings of this review, it has received little to no coverage in the mainstream media. In fact, the author of the review reports she had difficulty finding a journal to publish her work at all.[15] The reticence of major media outlets and even scientific journals to cover the harms from puberty blockers makes it critical that the FDA alert the public to these harms by taking the actions requested in the Petition.

4. **<u>A whistleblower report has revealed that so-called gender affirming care is driven by activists, not evidence.</u>**

On March 4, 2024, journalists Mia Hughes and Michael Schellenberger released a set of communications known as the WPATH Files.[16] WPATH is the World Professional Association for Transgender Health, the organization that sets standards of care followed worldwide by clinicians who treat individuals who identify as "transgender" or have been diagnosed with gender dysphoria, including children. *See* **Petition** at 8. A whistleblower or whistleblowers with access to WPATH's internal message board leaked the WPATH Files, a sprawling collection of private messages documenting conversations among WPATH members—physicians, mental health clinicians, and activists—about providing so-called gender affirming care to often profoundly mentally ill children and adults.

The messages cover the range of "gender affirming" interventions such as cross-sex hormones and genital surgeries. Concerning puberty blockers, the WPATH Files contain particularly disturbing revelations about the poor evidentiary basis for their use and the harms inflicted on children.[17] In response to a question about "orgasmic response and fertility," the president of WPATH states the following:

> The fertility question has no research that I'm aware of as puberty onset allows for fertility options while blockers preclude those opportunities.

> The orgasmic response question is thornier and observational based largely upon the growing cohort of puberty blocked individuals seeking gender affirming surgical care years later (i.e. now, with our office providing that care to a large number). To date, I'm unaware of an individual claiming ability to orgasm when they were blocked at Tanner 2. Clearly, this number needs documentation and the longterm sexual health of these individuals needs to be tracked. Again, puberty blockade is in its infancy—observational reports are commonly the nidus for future study, as will likely be the case here.[18]

The admission that puberty blockers, when started at the early stages of puberty, may permanently interfere with patients' sexual experience adds yet another serious harm from off-label use of puberty blockers to those identified in the Petition. The admission is further proof of the central contention of the Petition, namely, that the off-label use of puberty blockers in children distressed about their sex amounts to an uncontrolled medical experiment on an especially vulnerable population.

It is a longstanding principle that the FDA regulates medical products, not the practice of medicine. But the WPATH files show that the international body setting standards of care in "transgender healthcare" and many of its most prominent practitioners are guided not by evidence-based medical training or medical ethical principles such as the Hippocratic Oath to do no harm, but by activism.[19] Under these circumstances, it is not only appropriate but necessary for the FDA to step in to protect children from interventions that amount to medical experimentation.

5. **A non-profit has formed to seek FDA approval of drugs used off-label on individuals—including children—with "gender incongruence."**

Not only has the FDA failed, to date, to alert the public to the safety concerns and poor evidentiary basis for any benefit from the off-label use of puberty blockers; recent reports suggest the FDA's actions have encouraged a sponsor to seek approval for this use. The Research Institute for Gender Therapeutics (RIGT) is a nonprofit with a stated mission "[t]o bring clinical treatment of gender diverse individuals into standard medical practice by researching, developing, and seeking formal regulatory approval of therapeutic options for gender dysphoria."[20] In other words, RIGT was formed to pursue FDA approval of drugs currently used off-label.

According to the organization's press release[21] and reporting in STAT,[22] RIGT met with the FDA in November 2023, to discuss a drug development plan to support approval of the female hormone estradiol for use in men who seek to modify their sex traits to emulate those of women. If accurate, this reporting suggests that the FDA is prepared to deviate from its usual rigorous drug approval standards for drugs used in so-called gender affirming care. Specifically, according to STAT, the FDA:

- *Recommended that RIGT forego a placebo control in its study*. Placebo-controlled trials provide the best evidence of effectiveness. It is difficult to know why the FDA would accept a less stringently controlled trial for these medications, but some reporting has surmised that FDA's decision may signal that the FDA believes that data supporting the use of hormones to treat distress related to one's sex is strong, and withholding treatment from the placebo group would be unethical.[23] Neither of these things is true.
- *Agreed with RIGT that effect on secondary sex characteristics was an appropriate endpoint for the study.* The FDA has apparently advised RIGT to design their study to show that estradiol affects secondary sex characteristics, such as breast development and other superficial, cosmetic changes rather than improvement in a mental health condition, such as gender dysphoria. If the reporting is accurate, the FDA appears to be clearing a pathway towards approval based on data that does not establish a clinical benefit, potentially exposing more vulnerable people with mental disorders to potent but ineffective drugs.
- *Recommended that RIGT include minors aged 13-17 in its study population instead of limiting enrollment to adults*. To protect kids from being exposed to potentially unsafe drugs without benefit, the FDA usually expects drug sponsors to conduct studies of their drugs in adults before studying them in children. If, as reported, the FDA recommended that RIGT enroll adults and adolescents in the same study, perhaps the FDA believes safety and clinical benefit have been sufficiently established in adults to allow a clinical study in children. As the Petition demonstrates, this is not true. Multiple systematic reviews of the use of hormones to treat gender dysphoria have found existing evidence to be poor or very poor.[24]

Based on the FDA's apparent willingness to deviate from its usual requirements for drug approvals—in particular, the FDA's reported openness to pediatric trials of cross-sex hormones—RIGT states that it now plans to pursue approval of puberty blockers.[25] It is critical that the FDA commission a systematic review of the off-label use of puberty blockers, as requested by the Petition, *before* the FDA reviews a New Drug Application (NDA) for puberty blockers supported only by a study with no placebo control and questionable endpoints, as it is unlikely the NDA will contain the probing review of existing evidence necessary to permit a full consideration of this use in children.

We wrote in our Petition that the use of puberty blockers in "gender affirming care" is an unfolding medical scandal. The developments in the over six months since the Petition's filing have confirmed that assessment. As we learn more about this experimental use of potent drugs on children, there are likely to be additional revelations of harm and more prominent voices joining the call for change. If harmful interventions continue, and children suffer the irreversible consequences, such developments will only add to the sense of outrage and disbelief among parents, responsible practitioners, and detransitioners and others who have been directly harmed. Timely, decisive action by regulators is needed to inform public opinion and reform clinical

practice. For the reasons stated in our Petition and further supported by developments since its filing, we repeat our request for action by the FDA against the off-label use of puberty blockers in children.

Respectfully submitted:

Nancy Stade

Attachment 1: *The Cass Review: The independent review of gender identity services for children and young people* (2024).

Submitted on behalf of **Petitioners:**[1], [2]

BELGIUM

Patrik Vankrunkelsven, MD, PhD
Department of Public Health and Primary Care
Professor emeritus
KU Leuven

Sophie Dechene, MD MRCPsych
Child and Adolescent Psychiatrist

Beryl Koener, MD, PhD
Child and Adolescent Psychiatrist
Board Member Observatory "La Petite Sirène"

Robert Naeije, MD, PhD
Internal medicine
Professor emeritus in Medicine and Physiology
Free University of Brussels

Kristina Casteels, MD PhD
Pediatric Endocrinologist, UZ Leuven
Associate Professor, KU Leuven

CANADA

Sarah Jorgensen, PharmD PhD
Postdoctoral fellow
Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario
Ottawa Hospital Research Institute, Ottawa, Ontario

Joanne Sinai, MD, MEd
Psychiatrist
Clinical Associate Professor
University of British Columbia
Victoria, British Columbia

Leonora Regenstreif MD, CCFP(AM), FCFP
Adjunct Clinical Professor
Department of Family Medicine
McMaster University
Hamilton, Ontario

FINLAND

Laura Takala, MD PhD
Specialist in Adolescent psychiatry
Helsinki University Hospital
Helsinki

Katinka Tuisku, MD, PhD
Adjunct Professor in Psychiatry
Helsinki University Hospital,
Department of Psychiatry
Helsinki

Marja Työläjärvi, MD
Specialist in Psychiatry and Adolescent Psychiatry,
Tampere University Hospital,
Department of Adolescent Psychiatry
Tampere

David Gyllenberg, MD, PhD
Chief Physician
Helsinki University Hospital
Department of Adolescent Psychiatry
Helsinki

Samuli I. Saarni, MD, PhD
Psychiatrist, Adjunct Professor of Healthcare Ethics
Helsinki University
Helsinki

Riittakerttu Kaltiala, MD, PhD, BSc
Professor of Adolescent Psychiatry, Chief Psychiatrist
Tampere University Hospital and Tampere University
Tampere

FRANCE

Caroline Eliacheff, MD
Child psychiatrist, psychoanalyst,
Co-director of Observatory "La Petite Sirène"

[1] One of the original signatories, Dr. Jay Allen, died in November 2023, after a long struggle with cancer. Dr. Allen knew his disease was terminal yet chose to give some of his remaining time to the cause of protecting children from the irreversible harms inflicted by pediatric interventions to modify sex traits.

[2] Affiliations, where given, are for identification purposes only.

Céline Masson, PhD, HDR
Full professor of child psychopathology
Psychoanalyst,
Co-director of Observatory "La Petite Sirène",
Jules Verne University

Anne-Laure Boch, MD PhD,
Neurosurgeon

Nicole Athea, MD
Gynécologist and Endocrinologist

NORWAY

Anne Waehre. MD PhD
Pediatrician, Senior Consultant
Oslo University Hospital
Oslo

SOUTH AFRICA

Allan Donkin, MBChB
Family Doctor
Western Cape

Janet Giddy, MBChB, MFamMed, MPH
Family Physician
Public Health Consultant
Cape Town

SWEDEN

Sven Román, MD
Child and Adolescent Psychiatry
Consultant psychiatrist
Sweden and Norway

Giedre Griglioniene, MD PhD
Pediatrician and Clilnical Geneticist
Associate Professor
Stockholm

Christian Schmitt, MD
General Practitioner
Gothenburg, Sweden
Christian Schmitt, MD, General Practitioner, Gothenburg

UNITED KINGDOM

Dr David Bell, MRCP, FRCPsych
Retired consultant psychiatrist

Jennie Cummings-Knight, MA Couns.,
PGCE, FHEA,
Accredited Mediator, RMBACP
Psychotherapist

Dr Chris Holdridge, BA, MBBS, AKC,
MRCGP,
General Practitioner partner and clinical director

Dr Az Hakeem, MBBS, MSc, FRCPsych
Consultant Psychiatrist and group analyst

Dr Julie Maxwell, MBBCh, MRCPCH
Community Paediatrician

Dr Katie Clyde, MBChB, DGM,
PGCGerontology
Consultant Psychiatrist

Dr Hannah Ryan, MBChB, MSc,
DTM&H, MRCP
Registrar in clinical pharmacology and general internal medicine

Dr Aileen O'Brien
Consultant Psychiatrist

Dr Kiran Sharma, MBBS, MRCGP
General Practitioner

Dr Juliet Singer
Consultant Child and Adolescent Psychiatrist
Ex-governor of the Tavistock and Portman NHS Foundation Trust

Dr Pamela Yerassimou, MB BCh,
MRCPsych
Consultant Psychiatrist

Dr Celia Sadie
Consultant Clinical Psychologist

Dr Louise Irvine
MBChB, DRCOG, MSc, General Practitioner

Dr Nicky Cowan
Consultant Psychiatrist

Bob Withers
Jungian Analyst

Stella O'Malley
Psychotherapist and Author

Dr Tessa Katz, BSC, MBChB, MRCGP,
DRCOG
General Practitioner

Dr Hannah Ryan, MBChB MSc MRCP
DTM&H
SpR Clinical Pharmacology
Royal Liverpool University Hospital

David Pilgrim MSc, MPsychol (Clin), PhD
Visiting Professor of Clinical Psychology
University of Southampton
Southampton

Dr Ita Lyons MB BCh FRCPsych
Consultant Psychiatrist

Lenny Cornwall MD FRCPsych
Consultant Psychiatrist
Tees, Esk & Wear Valleys NHS Trust
North Yorkshire

Stephen Westgarth, MBBS MRCPsych
PgDipCBT
Medical Director, Child Psychiatry

UNITED STATES

Miriam Grossman, MD
Child and Adolescent Psychiatrist

Patrick Hunter, MD MSc
Pediatrician and Bioethicist

William Malone, MD
Endocrinologist

Carrie Mendoza, MD
Emergency Medicine

Quentin van Meter, MD
Pediatric Endocrinologist

ORGANIZATIONS

Clinical Advisory Network on Sex and Gender (CAN-SG - can-sg.org)
Detrans Help
Gender Dysphoria Alliance
Genspect
Genspect, USA
International Partners for Ethical Care (PEC)
Our Duty, USA
Therapy First
(formerly Gender Exploratory Therapy Association)
Themis Resource Fund
Women's Liberation Front (WoLF)

Notes

1 Hilary Cass, chair, *The Cass Review: The independent review of gender identity services for children and young people*, THE CASS REVIEW (April 2024), https://cass.independent-review.uk/wp-content/uploads/2024/04/CassReview_Final.pdf.

2 *See id.* at 172–79.

3 Tara John, *England's health service to stop prescribing puberty blockers to transgender kids*, CNN (March 15, 2024), https://www.cnn.com/2024/03/13/uk/england-nhs-puberty-blockers-trans-children-intl-gbr/index.html, *archived at* https://perma.cc/TX6U-EN39.

4 *See* SEGM: Society for Evidence Based Gender Medicine for an overview of recent actions by international regulators concerning interventions to treat children diagnosed with gender dysphoria, http://www.segm.org/, *archived at* https://perma.cc/UW6H-ZXY4. *See also* SEGM, *The 2023 Dutch Debate Over Youth* Transitions (November 19, 2023), https://segm.org/Dutch-protocol-debate-Netherlands, *archived at* https://perma.cc/5DPE-6NTL.

5 Department of Health and Human Services Assistant Secretary for Health Levine has repeatedly endorsed puberty blockers and other pediatric interventions that prevent normal sexual development, arguing that puberty blockers are necessary to prevent kids from going through "the wrong puberty," and stating without evidence that "gender affirming care is essential and can be lifesaving." *See* Luke Gentile, *Rachel Levine ripped after arguing hormones help children avoid 'wrong puberty'*, WASHINGTON EXAMINER, July 18, 2023, https://www.msn.com/en-us/health/other/rachel-levine-ripped-after-arguing-hormones-help-children-avoid-wrong-puberty/ar-AA1e2zpB, *archived at* https://perma.cc/YQ74-GFZ3; Chad Terhune, Robin Respaut, and Michelle Conlin, *Youth in Transition, Part 1: A Dearth of Science*, REUTERS (October 6, 2022), https://www.reuters.com/investigates/special-report/usa-transyouth-care/#article-part-1-a-dearth-of-science, *archived at* https://perma.cc/C6GZ-GEKR. Secretary Becerra has also indicated support for "gender affirming" pediatric interventions. *See, e.g.*, *Statement from HHS Secretary Xavier Becerra on Missouri's Emergency Regulation Restricting Access to Gender-Affirming Care*, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (April 25, 2023), https://www.hhs.gov/about/news/2023/04/25/statement-hhs-secretary-xavier-becerra-missouris-emergency-regulation-restricting-access-gender-affirming-care.html, *archived at* https://perma.cc/45GS-W6BA.

6 World Health Organization, *WHO announces the development of a guideline on the health of trans and gender diverse people*, WHO (December 18, 2023), https://www.who.int/news/item/18-12-2023-who-announces-the-development-of-a-guideline-on-the-health-of-trans-and-gender-diverse-people, *archived at* https://perma.cc/96A3-LBH4.

7 *Id.*

8 A petition opposing the proposed guidelines has close to 12,000 signatures. *See Who Should Go Back to the Drawing Board on its Transgender Health Guidelines,* WHO DECIDES, https://who-decides.org/, *archived at* https://perma.cc/7ZYC-ZRX2.

9 *See* World Health Organization, *Frequently Asked Questions (FAQ): WHO development of a guideline on the health of trans and gender diverse people*, WHO (January 15, 2024), https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/tgd_faq_16012024.pdf?sfvrsn=79eaf57f_1, *archived at* https://perma.cc/B5CG-C5M2.

10 *See* Christopher Hutton, *Rachel Levine: No argument over 'gender-affirming care' among pediatricians*, WASHINGTON EXAMINER, May 1, 2022, quoting Assistant Secretary for Health Levine, https://www.washingtonexaminer.com/news/1711272/rachel-levine-no-argument-over-gender-affirming-care-among-pediatricians/, *archived at* https://perma.cc/2TZB-T6L8.

11 *See* Sallie Baxendale, *The impact of suppressing puberty on neuropsychological function: A review*, ACTA PAEDIATRICA (February 9, 2024), https://doi.org/10.1111/apa.17150.

12 *Id.* at 9.

13 *Id.*

14 Another recent review considered the troubling ethical implications of artificially blocking puberty with GnRH agonists. *See* Sarah C. J. Jorgensen, Nicole Athéa, & Céline Masson, *Puberty Suppression for Pediatric Gender Dysphoria and the Child's Right to an Open Future*, ARCHIVES OF SEX BEHAVIOR (April 2, 2024), https://doi.org/10.1007/s10508-024-02850-4.

15 *See* Sallie Baxendale, *Why did three journals reject my puberty-blocker study?,* UNHERD (February 12, 2024), https://unherd.com/2024/02/why-did-three-journals-reject-my-puberty-blocker-study/, *archived at* https://perma.cc/4U2Y-VH67.

16 *See The WPATH Files*, ENVIRONMENTAL PROGRESS (March 4, 2024), https://environmentalprogress.org/big-news/wpath-files, *archived at* https://perma.cc/VT2T-MBR9.

17 *See* Mia Hughes, *The WPATH files: Pseudoscientific surgical and hormonal experiments on children, adolescents, and vulnerable adults*, ENVIRONMENTAL PROGRESS (March 4, 2024) at 116, https://static1.squarespace.com/static/56a45d683b0be33df885def6/t/65f987bb8d1a536990eb6fd6/1710852030992/WPATH+Report+and+Files.pdf, *archived at* https://perma.cc/GPM2-PSZT.

18 *Id.* at 117.

19 *Id.* at 70: "WPATH is not a medical organization. It is not engaged in a scientific quest to discover the best possible way to help vulnerable individuals who are suffering from gender-related distress. Instead, it is a fringe group of activist clinicians and researchers masquerading as a medical group, advocating for a reckless hormonal and surgical experiment to be performed on some of the most vulnerable members of society."

20 *See The RIGT Solution*, THE RESEARCH INSTITUTE FOR GENDER THERAPEUTICS, (March 23, 2024), rigt.org, *archived at* https://perma.cc/A3X9-C329.

21 See *Latest News*, THE RESEARCH INSTITUTE FOR GENDER THERAPEUTICS, (March 23, 2024), https://rigt.org/latestnews, *archived at* https://perma.cc/Z5XF-RMM2.

22 Theresa Gaffney, *The push to get estrogen FDA-approved for gender-affirming care*, STAT (November 28, 2023), https://www.statnews.com/2023/11/28/fda-gender-affirming-care-estrogen-approval/, *archived at* https://perma.cc/H2C5-CF77. The FDA's feedback to RIGT was also reported in *Politico, Forbes*, and *Axios*: https://www.politico.com/newsletters/prescription-pulse/2023/12/01/fda-weighs-in-on-gender-affirming-care-study-00129496, *archived at* https://perma.cc/9N4Y-VNR3; https://www.forbes.com/sites/joshuacohen/2023/12/02/without-rct-fda-may-consider-approval-of-a-cross-sex-hormone-for-gender-affirming-care/?sh=282fc3c16a69, *archived at* https://perma.cc/85HM-2BP4; https://www.axios.com/2023/12/15/fda-transgender-hormone-therapy-gender-affirming-care, *archived at* https://perma.cc/S4F7-X6MU.

23 *See* Gaffney, *id*.

24 *See* Gaffney, *id.*; *see also The effort to get FDA approval for drugs currently used off-label in "gender-affirming care"*, GENSPECT (December 20, 2023), https://genspect.org/the-effort-to-get-fda-approval-for-drugs-currently-used-off-label-in-gender-affirming-care/, *archived at* https://perma.cc/6JHJ-YSGJ.

25 *See* Gaffney, *id*.